## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

KNUTSON et al.

Confirmation:

3761

Serial No.:

10/590,893

Art Unit:

2614

Filed:

August 28, 2006

Examiner:

Jamal, Alexander

For:

Acoustic Echo Canceller with Multimedia Training Signal

## **DECLARATION UNDER 37 C.F.R. §1.132**

- I, Benyuan Zhang, declare and say:
- 1. That I am a citizen of the United States of America, and I reside at 6 Westbrook Drive, Cherry Hill, New Jersey 08003, United States of America;
- 2. That I received a Bachelors of Science degree in Electrical Engineering from Shanghai Jiao Tong University in 1983 and a Master of Science degree in Electrical Engineering from both Shanghai Jiao Tong University in 1989 and the State University of New York at Buffalo in 1997;
  - 3. That, since 1998, I have worked in the consumer electronics industry;
  - 4. That since 2004 I have been employed by Thomson S. A. ("Thomson");
- 5. That I have read the above-identified patent Application, Serial No. 10/590,893 ("Application"), published as US 2007/0189508 ("Knutson");
- 6. That I have reviewed the Examiner's rejections and the reasons therefor in the Final Office Action mailed May 8, 2009 ("Final Office Action");
- 7. That I consider myself to be a person with ordinary skill in the subject matter disclosed by Knutson as of March 5, 2004;

### Sampling rates

8. That, as of March 5, 2004 and without undue experimentation, it was obvious and well known in the art that audio signals, *i.e.*, for entertainment purposes, typically were sampled at 44.1 ksps or 48 ksps for a high-fidelity system, and, that such sampling rates must be larger than

# Delay matching

12. That, as of March 5, 2004 and without undue experimentation, it was obvious and well-known in the art that matching a delay of a first path with a delay of a second path could be implemented anywhere along the feedback/transmission paths as indicated by the Examiner, including, using the delay matching buffers 532 and 542 as shown in Figure 5 of Knutson or in software to compensate for the delay in the sound card buffers, and that, as of March 5, 2004 and without undue experimentation, for a given sound card, the difference between output and input buffers were obvious and well-known in the art. How to decide the delay disclosed in Knutson for this purpose was obvious and well-known;

#### Average processor load

- 13. That, as of March 5, 2004 and without undue experimentation, it was obvious and well-known in the art that there were numerous methods available to measure average processing load. Some popular examples included, as of March 5, 2004, the well-known TOP utility. TOP was commonly in use to assess average processing load and make decisions therefrom. Also, the Microsoft Windows operating system, (all versions available as of March 5, 2004) provided task management that reported aspects of processing load including at least one average; and
- 14. That the undersigned declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application cited above or any patents issuing thereon.

7/28/2009,2009

Benyuan Zhang

Attachment: US 6,009,151